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REPORT ON SOME CONTRIBUTIONS TO THE BEITRÄGE ZUR PSYCHOLOGIE DER AUSSAGE

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The *Beiträge zur Psychologie der Aussage* is a German periodical magazine, edited by William Stern and a few other psychologists, among whom is the foremost psychologist of the Netherlands, Professor Heymans, of Groningen. The German word *aussage* means "to state, declare, report," and the *Psychologie der Aussage* is concerned with questions like these: Suppose a man on the witness-stand makes, even under oath, certain statements, how much of what he swears to be facts are we to believe? Or, suppose a newspaper man writes a report of an accident or event, how much of what he writes may we accept as true, granted that he has done his utmost to be as exact as possible?

To solve these questions several experiments have been made by various investigators: Stern experimented with 35 children of an elementary public school; Rosa Oppenheim, exclusively with 30 girls; Max Lobsien, with 4 classes of girls and 5 classes of boys; Rodewaldt, with 50 hospital soldiers.

Stern took from the lowest, the middle, and the upper grades two backward, two mediocre, and two bright pupils and led them, one at a time, into an empty schoolroom, where for one minute each had to look at the picture of a room in a farmer's house. Then the picture was taken away and the child had to report what it had seen. Afterward, 73 questions, previously written out, had to be answered: 4 referred to persons; 26, to things; 5, to activities of persons; 9, to localities; 18, to colors; 11, to qualities and numbers. Besides there were 12 *suggestive* questions, i.e., questions as to things that do not exist. Nine and a half weeks later the children were asked the same questions, without the picture being shown them.

The other investigators' experiments were not exactly like this, yet the general plan was the same.

Compare the following results:

	PERCENTAGE OF MISTAKES	
	In Reports	In Answers to Questions
Stern	6%	33%
Oppenheim	5	33-34
Rodewaldt	6	32-33

The experiments showed that no one reports without mistake, and that the *Merkfähigkeit,* the power of perceiving, increases with age; that a *spontaneous report without mistakes is not the rule, but the exception;* and that, even when people take an oath that certain statements are correct, the fact is that they make 10 per cent. mistakes. Those who will not swear make 20 per cent. As the above table indicates, in general, *the answers to questions contain four times as many mistakes as the reports.* From this we may conclude that for the sake of truth no person on the witness-stand should be interrupted by questions, and that it is wiser for the teacher to let the pupil say what he knows than to confuse him with many detailed questions. In reporting, a person disposes freely of his mental stock. What is clearest is reproduced. Images that are just beneath the threshold of consciousness are dragged up to the surface along with it.

Suggestibility.—To measure the suggestibility, Stern and Rodewaldt asked twelve, Oppenheim ten, questions with reference to non-existing things: for instance, "Is there not a stove in the room?" "What about the glasses on the table?" Of the answers to normal questions Stern found 66 per cent. to be right; of those to the *suggestive* questions, only 59 per cent. Rodewaldt had only 47.3 per cent. good answers to the latter.

Netschajew, of the Pedagogical Laboratory at St. Petersburg, experimented in the following way: He gave the pupils of all classes a sheet of paper and a pencil, and, after they had written down their grade, age, and name, he directed: "As soon as I have said *now,* write down some number; for example, 8;"

or, "Write a sentence on anything you like; for example, music." This experiment was carried out in all classes at the same time. The papers were collected, and it was found that many pupils had written down the figure 8 and a sentence with the word *music* in it. But there were some also who had put down 7 or 9; others had given a number containing 8, as 28, 18, 108, and 198; and their sentences were not exactly on music, but on something associated with music, as: "I like to play the violin."

In general, the experiments made clear that the younger the pupils, the more they follow *direct suggestions;* and that, as they grow older and become more masters of themselves, the ego begins to assert itself. That they are going to have a mind of their own is shown in their greater liability to *indirect suggestions.* The Russian experimenter's figures show that *pupils in the age of puberty follow more indirect than direct suggestions* (23-11 per cent.).

Discontinuity of mental development.—Extensive dynamometric experiments by Schuyten, of Antwerp, have shown that the energy of attention steadily increases from October on, is abundant until March, and then diminishes, reaching its low-water mark in July. The power of attention notably diminishes during the late spring and summer months, but muscular power increases in a remarkable way up to June or July. This is true both for girls and boys.

Stern's experiments show, not only that there is a *distinct discontinuity of development,* but also that *it is not the same in boys as in girls.* With girls between seven and ten years the extensiveness of knowledge—as shown by spontaneous reports and answers to questions—increases but little; the fidelity (percentage of *exact* problems) even decreases. Between the age of 10 and 15 both increase strongly. Boys are at their best between 7.3 and 11 years. After this, the increase as to extensity and exactness is comparatively little. Boys report more than girls; yet the girls are more exact in their reports. This does not increase with age. Boys and girls of 7 years made 6 per cent. mistakes; the pupils of a seminary, soldiers, and university students made as many. As to the extensiveness, the sum-total, of their statements we find:

Girls of lowest grade report 12.6% of the facts
Girls of highest grade report 29.8% of the facts
Boys of lowest grade report 15.2% of the facts
Boys of seminarian grade report 39.5% of the facts

The *Merkfähigkeit* (power of perception) *is also a function that is capable of progressive development.*

From these investigations we may conclude that a child is not a small adult, and that mental development is more an additive than a proportional process.

The reports and answers contained many categories: persons, things, actions, and qualities. Development does not proceed in a way that the younger children answer of each category a few elements, and the older pupils perceive of each category many elements. No, the fact is: the younger children report *few,* the older *many,* categories. Children 7 years old mentioned spontaneously only *persons* and *things.*

Interest.—Girls report more personal categories, boys more those related to things. *Persons and their actions form one-third of the total reports of the girls; with boys, it is one-fourth.* The girls of the middle grades are most interested in the doings of persons. With boys this stage lies between the lower and middle grades. Girls remain longer in the stage of attending to persons, things, and actions; boys reach sooner the stage of quality and relation. Colors and qualities were mentioned last. This is strange, as the colors on the pictures were very conspicuous. It is evidently not the vividness of a sensory impression that determines the choice of perception, but *interest.* With reference to interest, knowledge, and exactness in stating colors, the girls proved to be far behind the boys.

It is perhaps unwise at the present moment to draw from these investigations practical pedagogical deductions. As far as the experiments have been carried on, they plead against coeducation, and it would seem that teaching which is of a theoretical nature does not appeal very much to the girls. "Only a teacher," says a German educator, "who by his or her personality can greatly influence the girl may have results. The girl more than the boy is inclined to ask: 'How does the subject-matter affect my personal life?' Her courses of study, therefore, should be practical."

Safer inferences are these:

1. Questions of detail make a report worse.

2. The ordinary question has suggestive influence; the more so a suggestive question; and still more so when the questioner indicates what he thinks. ("Was not the dress blue?")

3. It is better to ask in this way: "Is among these persons or things the particular person or object?" than: "Is not this the man, the coat, etc?"

4. It is of importance to know whether a statement is spontaneous or an answer to a question. If the latter, how was the question put? "La question forme avec la réponse un tout indivisible."

5. The value of a statement *(Aussage)* also depends on what others have said, or the press has written. Especially the printed word is suggestive—a man on the witness-stand is often influenced by his daily paper.

6. In general, only those statements of events and things which a person attended to without strong emotional effects can be trusted. The results with descriptions of an action, of a process, are better than those of a locality or a space. The mind is less attracted by outward appearances and colors than by movements. Strong emotions tend to exaggeration.

7. Lapses of time under five minutes are almost invariably overrated and the more so the shorter the time. There is no tendency for over- and underrating times between five and ten minutes. Times over ten minutes are usually undervalued, although not much.

These conclusions were made by Otto Lipman, and are based on his own experiments as well as on those of Stern and others. For the teacher they may probably have practical value; but, above all, judges, lawyers, and members of a jury should take notice of them.